



Dated: August 26, 2024

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

On August 26, 2024, I electronically submitted the foregoing document with the clerk of the court of the U.S. District Court, Northern District of Texas, using the CM/ECF system which will send a notice of electronic filing to all counsel of record. I hereby certify that I have served all counsel of record electronically or by another manner authorized by Federal Rule of Civil Procedure 5(b)(2).

/s/ Abigail R. S. Campbell  
ABIGAIL R.S. CAMPBELL

# EXHIBIT 1

(UNDER SEAL)

# EXHIBIT 2

# Hidden city travel and its impact upon passengers

Implications for the traveling public

Dr. Bijan Vasigh, Professor

### **INTRODUCTION OF DR. VASIGH**

Professor Bijan Vasigh is currently a Professor of Economics and Finance in the College of Business at Embry-Riddle Aeronautical University, Daytona Beach, Florida, and the President and Founder of Aviation Consulting Group. He has an extensive history and résumé with the airline industry. His extensive qualifications and curriculum are attached.

Professor Vasigh has focused his consulting and teaching on the theory, modeling, application of financial instruments in transport finance, and provides expert opinion in court cases. He is the author of North America's leading aviation textbooks, including *An Introduction to Air Transport Economics: From Theory to Application*, *Foundation of Airline Finance: Methodology and Practices*, and *Aircraft Valuation in Volatile Market Condition*.

Professor Vasigh's work has led to formal collaborations with multiple domestic government agencies and foreign governments, such as the International Civil Aviation Organization ("ICAO"), the Association of Unmanned Vehicle Systems International ("AUVSI"), the International Air Transport Association ("IATA") Learning Center, and NASA on a grant on "Determination of Statewide Economic Benefits of the Small Aircraft Transportation System ("SATS"). Professor Vasigh diligently served as a key member of a three-person task force appointed by the Prime Minister of Trinidad and Tobago. The primary objective of the task force was to conduct a comprehensive investigation into the slot valuation procedures at London Heathrow Airport.

He has been interviewed and quoted by national and international news media, including *The Washington Post*, *Wall Street Journal*, NBC News, CBS News, *USA Today*, *Forbes*, Bloomberg Business, National Public Radio ("NPR") Marketplace, Voice of Russia, El Pais (Spain), Rzeczpospolita (Poland), Trinidad Express, Cuba News, and *The Guardian* (United Kingdom), among others. Professor Vasigh's résumé is attached to this report as Ex. A.

## **REPORT**

### **I. TASK**

I have been asked by William L. Kirkman, an attorney in a pending lawsuit instituted by American Airlines against Skiplagged, Inc., to provide an expert opinion relating to hidden-city ticketing and Skiplagged, Inc.'s business operations related thereto based on my knowledge and expertise of the airline industry and of the concept of hidden-city ticketing.

I have set out in Ex. B, the material I have received from Mr. Kirkman and which I have reviewed. I have also prepared this report in the form of an Executive Summary and then the report itself.

### **II. EXECUTIVE SUMMARY**

Before 1978 and during the regulated era, the Civil Aeronautics Board (CAB) had full power to regulate all domestic interstate air transportation as a public utility and set routes, fares, and schedules. The CAB strived to keep fares reasonably low for public welfare while ensuring reasonable profit for airlines. The CAB's approach, which was mostly cost-based, often results in higher fares for longer trips (to some extent subsidized short-hauls through higher fares on long-hauls). The airlines had a virtual guarantee of profitability and protected markets to support that. The inefficiency of this system, along with passenger dissatisfaction due to rising prices, set the stage for the abolition of rigid regulation in favor of open market competition where the primary role of government is focused on safety (e.g., through FAA) and ensuring fair market competition (e.g., anti-trust law to support unrestricted market entry and prevent market concentration). The regulated era ended with the Airline Deregulation Act of 1978, which immediately resulted in the start of new airlines and fierce competition in airline fares.

The free-market foundation that fueled deregulation quickly resulted in lower competitive fares and the advent of new, innovative approaches to airline management. Leaving the cost-based approach behind, airlines adopted value-based fare pricing, which seeks to capture the highest return that can be demanded based on customers' willingness to pay. In other words, the price elasticity of demand drives the fare rather than the cost (which often closely correlates with distance). This enabled airlines to exploit high-demand markets for much higher fares and profit



margins. Consequently, an unprofitable route would be abandoned over time and perhaps picked up by a more competitive airline whose cost structure enables them to operate the route with a positive return, given the passengers' willingness to pay. Low-Cost Carriers (LCC) seem to fill this role, especially in smaller markets, which are feared to be subjected to service erosion due to lower demand and higher price sensitivity.

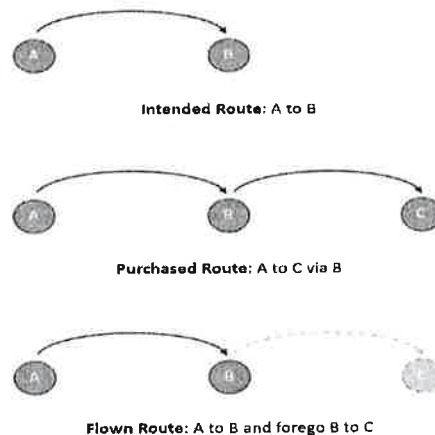
Aside from value-based pricing, deregulation facilitated the creation of the hub-and-spoke system by network carriers. Demand from smaller markets can be aggregated at a hub for final destinations, thus taking advantage of the economy of scale and resource aggregation, among other benefits. This practice resulted in cost savings for the airline but came at the cost of losing direct flights for the passengers (direct flights, however, were offered by LCC, although perhaps via secondary airports).

Subsequently, airlines expanded their focus and presence at a subset of airports, often distinct from one airline to another, and soon controlled a significant majority of the market at those selected hubs and focus cities. The term "fortress hubs" was coined in the 80s to highlight the significant market dominance of an airline in a hub airport, which inevitably comes with non-competitive and rather monopolistic routes to and from said hub. Even though anti-trust laws forbid it, hubs are naturally less hospitable to the entry of new airlines, which may pose serious challenges to Hubs' airlines. Such a market concentration that defies competition was not the intent of deregulation but appears as its consequence.

The Hidden City Ticketing (HCT) came into existence as a result of the aforementioned evolution in airline fare pricing post-deregulation. HCT is also referred to as "point beyond ticketing", cross-border ticketing", and "skiplagging." Simply put, HCT is the practice of purchasing a multi-segment flight itinerary with the intention of only using the first segment(s) of the itinerary because the fare of the extended itinerary is (significantly) cheaper than the fare of the intended first segment(s) alone<sup>1</sup>. In other words, the customer is paying for a bundle of products with the intention of only using part of the purchase and foregoing the reminder. Figure 1 below illustrates a typical HCT.

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<sup>1</sup> In theory, HCT may also cover a scenario that passenger extended their itinerary by adding a segment before the intended segment. However, in practice, airline will cancel the entire itinerary if the passenger does not show up for the first segment. Thus, this scenario has is inapplicable and ignored in this document.



**Figure 1.** Under HCT, a passenger purchases the itinerary for A to C with a connection at B at a price cheaper than the A to B itinerary, which is their intended itinerary. The passenger plans to only use the A to B segment and forego the B to C segment.

The HCT opportunity often only exists when the first segment (the intended segment) ends at a hub, and the final purchased itinerary destination is a non-hub of the operating airline. The existence of HCT is not guaranteed, and in fact, on a given route, it may dynamically appear and disappear over time. Nevertheless, various studies confirm the existence of HCT opportunities in the network of all major US carriers<sup>2</sup>.

The HCT opportunities, however, come at a cost and are not always available to passengers. Passengers who use HCT are often forced not to have checked-in luggage as they cannot retrieve their bags at a connecting airport. The fear of the airline's retaliation also deters passengers from using their frequent flyer program, and notable (or regular) use of HCT may place the passenger on the airlines' banned travelers list. Moreover, passengers accept the entire risk of delays and misconnections. Not to mention that HCT could only be used on one-way tickets or the return segment of two-way tickets, as airlines will cancel all future flights on an itinerary suspicious of practicing HCT. Given these consequences, the HCT price deviation with direct booking must be significant enough to justify the risk and limitations.

The primary reason for the existence of HCT is the value-based pricing of airline fares and the significant advantage such provides to the flying consumer public. Often, an airline faces

<sup>2</sup> According to the US General Accounting Office (GAO) about 17 percent of itineraries offered by major US airlines during their investigation exhibit HCT opportunities of \$100 for high-fare class or \$50 for low-fare classes (Hecker 2001).

limited competition at its hub, which allows it to exploit the opportunity to demand higher fares with less fear of competition interference. On the other hand, a non-hub destination more closely resembles a free-market scenario for an airline where the thread of response from a competitor shall be considered carefully. In such markets, passengers could choose between competitors. Thus, the fare a passenger accepts is not capped by their willingness to pay but determined by the best price offered, which may be significantly lower than the passenger's willingness to pay. Indeed, cost-based pricing that determines the fare by distance traveled will never allow for the existence of HCT opportunities.

On the routes prone to offer an HCT opportunity, we often see the opportunities occur closer to the departure day. It is a common practice in the airline industry to raise the price as the departure day of a given flight approaches. Passengers who purchase their tickets late are often the ones who realize the need to travel late, a need that may be accompanied by an urgency that raises the passengers' willingness to pay. So, airlines tend to exploit this urgent need of travelers to demand a higher price for their remaining seats closer to the departure. This rise in price, of course, will be affected by competition and airlines' understanding of price elasticity in a market.

The HCT is undesirable to airlines as it prevents them from exploiting the market, and demanding higher prices that they claim to be entitled to by leveraging their market dominance and lower competition.

Moreover, an unused flight may result in an empty seat without significant advanced notice to the airline; this means that the given airline lost the opportunity to make money from the seat a passenger purchased but chose not to use. However, this outcome highly depends on the airline's overbooking practice and only applies to a scenario in which all seats on the unused flight are sold out.

Indeed, airlines can easily eliminate all HCT opportunities since they set the fares. However, this practice means forgoing the opportunity to demand higher fares in less competitive markets and losing passengers to other airlines with lower fares in more competitive markets. Overall, the loss from this approach is expected to outweigh the potential savings of disallowing HCT.

The ability to profile passengers in a market and estimate their willingness to pay and their price elasticity is a critical capability that aids airlines in maximizing their profit. Airlines have the complete power to set prices and benefit from the availability of big data. In contrast, passengers often have less access to data and only have the power to choose when meaningful competing options are available. However, under the HCT, throwaway ticketing<sup>3</sup>, back-to-back ticketing<sup>4</sup>, and similar practices, passengers avoid the power imbalance by purchasing products that do not match the profile airlines expect from them. That provides a significant advantage to the flying consumer public and, in my opinion, is justified in the consumer marketplace. Hence, Skiplagged's business practice is justifiable.

### III. INTRODUCTION

Before the Airline Deregulation Act of 1978 in the United States, airlines operated under a regulatory framework that imposed strict control over various aspects of their operations, especially fares. The government had authority over routes, schedules, and fares for commercial air travel. However, the Airline Deregulation Act of 1978 fundamentally changed the regulatory landscape for the airline industry in the United States. Deregulation reduced government intervention by removing many of the regulatory constraints that had previously governed airlines.

One of the byproducts of deregulation in the airline industry was the emergence of hub-and-spoke network (H&S).<sup>5</sup> Figure 2 below illustrates a typical hub and spoke network. Deregulation allowed airlines greater freedom in selecting their routes and ticket prices. In this new network structure, airlines designate certain airports as hubs where they concentrate a large number of flights, connecting passengers from various origins to their final destinations through these central points. Major U.S. hub airports serve as the headquarters for numerous Fortune 500 companies, and these airports primarily cater to business travelers. These travelers typically

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<sup>3</sup> Throwaway ticketing is a special case of HCT where a round trip ends up to be cheaper than the one way ticket. Thus, a passenger benefit from buying the round trip with no intention of using the return ticket.

<sup>4</sup> Back-to-back ticketing is also known as bracketing, nested ticketing, and cross-ticketing. An example of this practice is where a passenger purchased two cheaper tickets with minimum stay and weekend stay but use them out of sequence as two more expensive mid-week return tickets.

<sup>5</sup> Airline hubs are airports that serve as central points for airlines, facilitating the efficient transfer of passengers between connecting flights. Airline hubs are often situated in major cities or regions with high passenger demand.

exhibit a low-price elasticity of demand, meaning they are less sensitive to changes in ticket prices. Many major hub airports around the world are characterized by the dominance of one or two airlines, which command a lion's share of the air traffic.<sup>6</sup> Hereafter, airlines can leverage this monopoly to command higher ticket prices due to the reduced sensitivity of business travelers to price fluctuations.

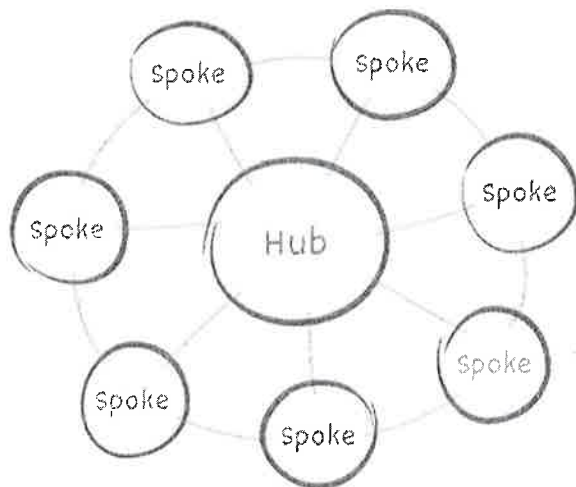


Figure 2: Hub and Spoke Network

As a result of deregulation, airlines gained the ability to implement dynamic pricing models, such as revenue management systems, which enabled airlines to adjust fares in real-time based on factors such as demand, competition, and inventory levels. Airline revenue management (RM), as we understand it today, is indeed considered a spinoff of deregulation, particularly in the United States. RM involves analyzing market demand, setting prices dynamically, and controlling the availability of fares across different booking classes. Revenue management systems help airlines allocate their limited capacity to the most profitable market segments (mainly from HUB) while balancing factors such as demand, and competition.

In this market environment, airlines have incentives to both reject passengers who are not willing to pay higher fares, in order to save inventory for higher value passengers, as well as to accept those lower-valued passengers, in order not to have inventory be unused. Hence, the objective of RM in the airline is to maximize revenue by selling the right product to the right

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<sup>6</sup> This dominance can give the airline considerable pricing power and control over routes, making it difficult for competitors to enter the market.

customer at the right time and for higher prices. Airlines employ sophisticated revenue management systems to optimize their profits by selling tickets at various prices to different types of passengers. This practice often involves a form of price discrimination, where passengers are charged different prices based on their willingness to pay. One common method is to charge higher prices for less price-sensitive passengers while offering discounts to more price-sensitive ones. Effectively, passengers flying in and out of hub airports often exhibit lower price elasticity of demand compared to those flying on non-hub routes. This strategy allows airlines to maximize revenue by capturing as much value as possible from each passenger segment. (Wandelt and Zhang, 2023).

Upon reviewing the attached Exhibit C it is evidence that there are fluctuations in ticket prices across different cities in Texas when flying via Dallas. Notably, the existence of hub premiums in certain markets adds an interesting dimension to this case.

Indeed, there are numerous travel websites and online platforms dedicated to helping passengers find the best deals on flights by offering various tools and features to compare prices and optimize travel itineraries. Skiplagged is one of these. These sites, including Skiplagged, leverage technology and data analysis to provide users with options to save money, including changing their itinerary to lower costs. Here's how these travel sites typically operate: Flight comparison tools, multi-city itineraries, price alerts, and flexible date searches. By leveraging these features and functionalities, passengers can use travel websites to explore various options and potentially find cheaper flights by adjusting their itinerary, being flexible with their travel dates, or taking advantage of special deals and promotions.

#### **IV. HIDDEN-CITY TICKETING (HCT)**

Major airports around the world serve as hubs for airlines, acting as central points where flights converge, and passengers transfer between different routes. These hubs are typically located in large cities and serve as primary points of departure and arrival for many flights. Hub carriers tend to charge higher fares to their passengers at their hubs, this may be called hub premium. The hub premium relates to higher fares for flights leaving from a carrier's hub airport. That is, all other things being equal, the fare is higher than it would have been if the departure



airport had not been the carrier's hub. The term 'hub premium' was introduced by Berry, Carnall and Spiller (1996), but the first to introduce the concept in general was Levine (1987).

The pricing of individual airline tickets has not been based on the cost of offering that exact seat, but it has always been based on how much airlines *can charge different passengers*. So, some tickets are sold at incredibly expensive ticket prices, while other tickets are sold at a very low price, sometimes below what it costs the airline to operate that seat.

HCT is an interesting airline ticket-pricing practice and occurs when an itinerary connecting at an intermediate city is less expensive than a ticket from the origin to the intermediate city. Hidden city ticketing (HCT) is a strategy used by some passengers to save money on airfare by booking a flight with a layover at their intended destination, and then intentionally skipping the connecting flight to stay at the layover city. HCT takes advantage of pricing disparities in airline ticketing, where sometimes flying from point A to point B with a layover at point C can be cheaper than a direct flight from A to B.

Airlines employ pricing strategies, where ticket prices fluctuate based on factors such as demand, monopoly power, and availability. This can lead to situations where indirect flights with layovers are priced lower than direct flights to certain destinations. Airlines often charge higher fares for flights that originate from or terminate at these major hub airports compared to flights between non-hub airports. This is because airlines have significant monopoly power, higher demand, offer greater connectivity, more flight options, and allow airlines to command higher prices for tickets.

With the advent of the internet and online booking platforms in the late 1990s and early 2000s, consumers gained unprecedented access to flight information and booking options. This accessibility empowered travelers to compare prices, explore different itineraries, and discover potential loopholes in airline pricing structures. Skiplagging, also known as hidden city ticketing, is a practice where a passenger purchases a ticket with a layover at the passenger's actual destination, intending to disembark at the layover airport instead of the final destination. The history of skiplagging can be traced back to the 1990s when the internet revolutionized the way

people searched for and booked flights.<sup>7</sup> With the emergence of online travel agencies and flight comparison websites, consumers gained access to a wealth of information and options for finding cheaper airfare. Passengers, seeking to save money or find more convenient routes, may have exploited the structure of airline pricing and routing. However, with the growth of the Internet, it is becoming easier for passengers to find such opportunities.

The level of concentration within an airline's hub-and-spoke network is a key driver of HCT. For example, the Dallas Fort Worth International Airport ("DFW") is currently served by 28 airlines that between them operate around 865 daily departures to 261 destinations across the US and the globe. American currently has about 84% of the market share at DFW, making it the largest carrier at the airport.<sup>8</sup>

HCT is an interesting airline ticket-pricing practice and occurs when an itinerary connecting at an intermediate city is less expensive than a ticket from the origin to the intermediate city. In such a case, passengers traveling to the intermediate city have an incentive to pretend to be traveling to the final destination, deplane at the connection point, and forgo the unused portion of the ticket. Hidden-city opportunities are not uncommon nowadays. *When the passenger skip the next leg of the flight, it can indeed create an opportunity for the airline to sell the empty seat at a premium price to last-minute travelers or those in urgent need of a flight.*

## **V. WHY HIDDEN CITY TICKETING EXISTS**

In a H&S network, airlines carry their passengers from an origin to their hub, and then from the hub to a destination. It is suggested that for airlines with higher market power and more dominated at an airport, the airlines could charge a higher fare to its passengers, compared with others (Yuen, 2017). Hidden city ticketing is typically done to save money, as direct flights to certain destinations can be more expensive than flights with layovers. According to a study conducted by Hopper using big data, hidden city fares are observed in 26% of domestic routes searched by consumers and are on average 21% less in price than simply buying the same direct flight. The same study also shows that "hidden city fares are highly concentrated on major hub

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<sup>7</sup> Online travel communities and forums played a significant role in popularizing skiplagging. These platforms provided a forum for travelers to share tips, strategies, and success stories related to hidden city ticketing, thereby raising awareness and interest in the practice.

<sup>8</sup> Airport World. March 6, 2023.



destinations spread across many origins: 47% of all hidden city routes fly to one of top 10 hubs” Hopper Research (2015).

Let's say you want to fly from Tuson (TSU) to Dallas/Fort Worth (DFW) by American Airlines, but the direct flight from TSU to DFW is expensive. There's far higher demand for flights to DFW, pushing fares up. For example, if a flight from TSU to DFW costs \$600, and a flight from TSU to Fargo (FAR) with a stop in DFW costs \$300, you could book the cheaper ticket to FAR and leave the airport when your plane lands in DFW. By doing this, you save money on your ticket.

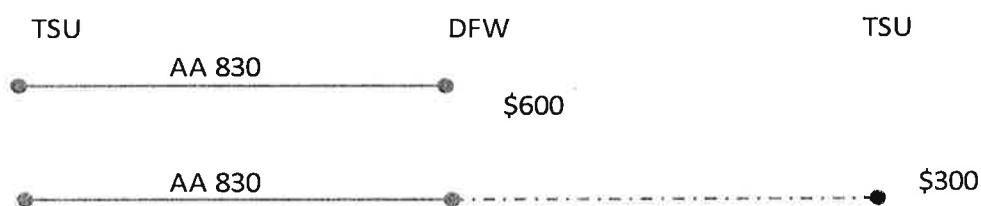


Figure 1: Example of Hidden-City Ticketing

Why would American charge you less than half as much to fly more than twice as far? Well, because American knows that if you're going to fly from TSU to FAR, you'll want to do so nonstop, and are probably willing to pay for it. Meanwhile if you're connecting to DFW, there's more competition in that market, so pricing will reflect that.

#### **VI. WHY ARE THERE DIFFERENT PRICING TO FLY TO AND FROM HUB**

The majority of larger hub cities are often situated at crossroads of international air routes, making them convenient stopover points for connecting flights between continents. Major hub cities often serve as important business centers, and many Fortune 500 companies are headquartered or have significant operations in these cities. These companies may rely on the connectivity provided by airlines serving these airports for their business travel needs. Some hub cities are also major financial and commercial centers, attracting corporations from various industries. A good portion of passengers flying in and out of hub airports are business travelers with an inelastic demand. Inelastic demand implies that changes in price have a relatively small effect on the quantity demanded. Chicago is served by O'Hare International Airport (ORD), one

of the busiest airports globally. Chicago is a major business hub, particularly in industries such as finance, transportation, and manufacturing. Several Fortune 500 companies, including Boeing, United Airlines Holdings, and Archer Daniels Midland, are headquartered in the Chicago metropolitan area. At many large hub airports, such as those serving major business centers like Atlanta, New York City, London, or Tokyo, the primary demographic of travelers consists mainly of business travelers. These travelers typically prioritize convenience, efficiency, and time-saving measures, making non-stop flights highly desirable. Unlike leisure travelers who may be more sensitive to price fluctuations and willing to consider connecting flights to save money, business travelers often prioritize direct routes to minimize travel time and maximize productivity.

This means that even if airlines were to adjust ticket prices for non-stop flights, business travelers would still be willing to pay premium fares to secure direct routes due to the time-sensitive nature of their travel needs.

Flights to and from airport hubs often experience higher demand due to the monopoly of the airlines, convenience of connecting flights and the availability of more routes. Airlines may adjust prices based on demand and competition on these popular routes. Airlines may charge a premium for flights to and from their hubs due to concentration of business travelers, headquarters of Fortune 500 corporations, the convenience they offer to passengers connecting to other destinations. Hub airports typically offer a wide range of flight options and connections, making them desirable for travelers. Airlines may capitalize on this convenience by pricing their hub flights slightly higher.

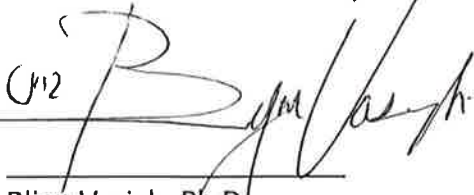
Business travelers are typically characterized as time-sensitive travelers who prioritize convenience and efficiency in their travel arrangements over price considerations. Given their need for flexibility and promptness, they are less price-sensitive compared to leisure travelers. Therefore, airlines often adjust pricing strategies for flights catering to business travelers accordingly. This could result in higher ticket prices for flights to and from hubs, as airlines aim to capture the value perceived by business travelers in terms of time savings, lack of competition, market monopoly, schedule flexibility, and access to a wide network of destinations for connecting flights.

## VII. CONCLUSIONS

Hidden city ticketing (HCT) exists primarily due to pricing disparities in the airline industry. Generally, passengers at airports dominated by big airlines tend to exhibit less price elasticity, meaning they are less sensitive to changes in ticket prices. This is often attributed to the limited competition and lack of alternative options available at these airports. With fewer airlines operating routes and offering flights, passengers have fewer choices and may feel compelled to accept the prices set by the dominant carriers. Additionally, passengers traveling for business purposes, especially those whose expenses are covered by their employers, are typically less price-sensitive and more willing to pay higher prices for the convenience, reliability, and amenities offered by established airlines. As a result, big businesses that dominate these airports can effectively set higher prices without experiencing a significant loss in demand.

Hidden city ticketing can offer a valuable opportunity for passengers with limited incomes to travel to their desired destinations more affordably and hence often plays a major role in driving consumer action. By taking advantage of pricing discrepancies and booking flights with layovers in their intended destinations, these passengers can often secure lower fares than they would with traditional booking methods, which provides a substantial justification for its existence.

Skiplagged's business and its providing of information relative to HCT can indeed provide passengers with a means to circumvent the monopoly positions that airlines often hold at certain hub airports. When airlines dominate a particular airport, they can wield significant pricing power, leading to higher fares and limited options for travelers. In such cases, hidden city ticketing helps passengers to bypass the high prices associated with direct flights to the hub airport's destination by booking flights with layovers at the hub. This provides a significant justification for its existence in the marketplace in my opinion.

Cr12  
  
Bijan Vasigh, Ph.D.  
April 23, 2024

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# **EXHIBIT A**

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# BIJAN VASIGH, PHD

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## Curriculum Vitae

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**ACADEMIC DEGREES:**

- Ph.D., Economics, State University of New York at Binghamton. Specialization: Applied Economic, Finance, and Quantitative Methods.
- M.A., Economics, University of Detroit, Detroit, Michigan. Specialization: Financial Economics, and Mathematical Economics.



**PRESENT APPOINTMENTS:**

- Professor and Tenured: August 1998 - Present:  
College of Business: Department of Economics, Finance and Accounting.  
Embry-Riddle Aeronautical University, Daytona Beach, Florida.
- Founder and President, Aviation Consulting Group, LLC, Ormond Beach, FL. 2002 to Present).
- Fellow Airneth. Airneth is the worldwide scientific network for aviation research and policy, based in the Netherlands. Airneth is financed by the Netherlands Directorate-General for Civil Aviation and Maritime Affairs (2006 to present).
- Jet Perfect Foundation, member of the Board of Directors
- Amirate Aviation University, a Member of Technical Committee, International Aviation Management Conference (IAMC), 2024.

**PAST APPOINTMENTS**

- Visiting Professor, the University of the West Indies., St. Augustine, Trinidad. Faculty of Social Sciences, 2007 - 2015.
- Visiting Professor, Danube University Krems, Professional MBA Aviation, Krems, Austria. January 2015.
- August 1996-August 1998: Graduate Program Chair, Department of Business Administration, Embry -Riddle Aeronautical University.
- August 1993 - August 1998: Associate Professor, Department of Business Administration,

Embry-Riddle Aeronautical University.

- June 1990- July 1993: Assistant Professor, Department of Business Administration, Embry-Riddle Aeronautical University.
- July 1989- May 1990: Assistant Professor of Finance, Department of Finance, School of Business, Indiana University of Pennsylvania, Indiana, Pennsylvania.
- September 1985-December 1987: Chairman, Department of Business Administration, Webber College, Babson Park, Florida.
- August 1984-August 1985: Assistant Professor, Department of Business Administration, Webber College, Babson Park, Florida.

***EXPERIENCE, RECENT CONSULTING:***

- Evolink Law Group, Burnaby, British Columbia, Expert Witness, contract violation 2022-Present.
- Morgan ad Morgan, USA, Expert Witness, Copy right violation, 2023.
- Unmanned Aircraft Systems Gulf of Mexico Center of Excellence, Economic Impact Analysis: January-October 2021.
- Studies of Airport Slots at Brazilian Airport, with collaboration of PEZCO Consulting, February 2021.
- Evaluating the Traveler's Perspective to Improve the Airport Customer Experience. Airport Cooperative Research Program (ACRP), in collaboration with IOS Partners 2019.
- New Istanbul Airport Project, Economic Impact Analysis (Technical Memorandum), Cignus Consulting and Jeppesen Sanderson, 2019.
- Market forecasting and financial analysis for airborne satellite services, QB Technologies, 2018-19.
- Air Nostrum, Líneas Aéreas del Mediterráneo, S.A., is a regional airline based in Valencia, Spain. Representing the company to expand its market in another country (2017-18).
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- Air Malta, National Airlines of Malta. Provided technical assistance on cost-rebalancing and cost reduction strategies to Air Malta (2008).

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- Consultant for a Pittsburg based startup airlines (Direct Jet), hired to develop a multi-year strategic business plan aimed at finding potential partners and investors in the United States. (2002 to 2006).
- Consultant for a Florida Based air taxi company, hired to develop a business plan looking for capital investors to finance the commercialization of their service in the North American market. (2002 to present).
- Consultant with the International Civil Aviation Organization (ICAO); provided assistance on the evaluation of aeronautical charge structure for the Brazilian Institute of Civil Aviation (IAC).
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#### **HONOR AND AWARDS:**

- Joseph R. Martin, Distinguished Professor of Aviation Management. Embry-Riddle University, College of Business, 2017.
- Editor in Chief, Journal of Airline and Airport Management, 2017.
- Grant from National Science Council (NSC) in Taiwan, on International Cooperation Program, Kainan University, Taiwan, October 12, 2010.
- Outstanding Faculty Awards, College of Business Administration, Embry-Riddle Aeronautical University, 2006.
- Faculty Member of the Year Nominee, Fall 2005.

- Journal of Air Transportation, Sorenson Best Paper Award, 2005.  
This award gives recognition to the author(s) with the best literary and scholarly contributions to the field of air transportation.
- Embry- Riddle University, Vice President's Funds for Development, 1999.
- Embry- Riddle University, Vice President's Funds for Development, 1996.
- Outstanding Faculty Awards, Department of Business Administration, Embry-Riddle Aeronautical University, 1995.
- Embry- Riddle University, Vice President's Funds for Development, 1995.
- Dissertation Fellowship Award, State University of New York, 1981-82.

***EDITORIAL BOARDS:***

- Journal of Transportation Management.
- Journal of Air Transportation.
- Transportation Journal.
- Journal of Airport Management (JAM).
- International Journal of Aviation Management (IJAM).
- The International Journal of Applied Management and Technology.
- Journal of Air Transport Studies.
- Revista de Literatura dos Transportes, The Review of Transportation Literature (RELIT).
- International Journal of Aviation Technology, Engineering and Management (IJATEM).

***PRESENTATION AT NATIONAL AND INTERNATIONAL REFEREED CONFERENCES:***

- The 4<sup>th</sup> International Aviation Management Conference (IAMC). The Future of Aviation: COVID-19 Pandemic and the Challenges (Keynote Speaker, and Presenter). Dubai, UAE. November 21-22, 2022.
- Global Financial Crisis and Performance of the Banking Industry: An Empirical Analysis. Co-authored with G. Rod Erfani from Transylvania University. The International Academic Conference on Management, Economics and Marketing in Vienna, Austria, in August 5-6, 2022.
- The Keynote Speaker, International Congress on Aviation Management, Istanbul Turkey,

December 10-11, 2021.

- The Keynote Speaker, the 5<sup>th</sup> International Aviation Management Conference (INTAVIC). The Economics of Disruptive Technology, Ankara-Turkey, November 18-19, 2021.
- The economics of unmanned aircraft system under deregulation market environment", Forum Global Conference, November 4-7, 2020.
- The mitigating human errors in aviation accidents and incidents. The 23rd Air Transport Research Society (ATRS) World Conference, Amsterdam, the Netherlands, July 2- 5, 2019.
- Methodologies and techniques for determining the value of an aircraft. The 14<sup>th</sup> International Academic Conference, Prague, Czech Republic, April 19 - 21, 2019.
- The Impact of training in reducing aviation accidents. The 27<sup>th</sup> International Conference on Innovations in Business, Economics, Management, Social Sciences. The Kuala Lumpur, Malaysia December 17-18, 2018.
- Aircraft Value: Under Operating Cost Shocks. The 22<sup>nd</sup> ATRS World Conference, Seoul, Republic of Korea, July 2- 8, 2018.
- Airline industry: Challenges and Chances of Legacy Airlines. International Academic Conference on Management, Economics and Marketing, Budapest March 16 - 17, 2018.
- The Impact of the Global Financial Crisis on Profitability of the Banking Industry: A Comparative Analysis. International Academic Conference on Management, Economics and Marketing, Budapest March 16 - 17, 2018.
- Full service vs. low-cost airlines: Are the business practices converging overtime. The 21<sup>st</sup> ATRS World Conference, Antwerp, Belgium, July 5 - 8, 2017.  
Demand for unmanned aircraft: Challenges, opportunities and operational restrictions. Western Regional Science Association, Santa Fe, New Mexico, February 15–18, 2017.
- Unmanned Aircraft Systems: Opportunities, Obstacles and Growth. The 20<sup>th</sup> ATRS World Conference, Rhodes, Greece June 23-26, 2016.
- Financial crisis and banking sector: A comparative analysis. International Atlantic Economic Conference, Lisbon, Portugal, March 16-19, 2016.
- Gerson Lehrman Group (GLG) Webcast, Air Transport Economics, Outlook for 2016, February 26, 2016.
- The impact of the global financial crisis on financial performance of Islamic banks. G. Rod Erfani, Transylvania University, and Bijan Vasigh. At 79<sup>th</sup> International Atlantic Economic Conference,



Milan, Italy, 11-14 March 2015.

- Sustainable Airline Management. Panel Chair, special panel on sustainability and aviation. Trakya Üniversitesi. Edrine. Turkey, September 23-26, 2014.
- Impact of Bird Strikes on Aircraft Operation and Prevention Methods Case Study. Presented at 16<sup>th</sup> Air Transport Research Society Conference, Bordeaux, France. July 17-20, 2014.
- The Determinants of the World Price of Crude Oil: An Empirical Analysis, International conference of Institute for Advanced International Studies; Laval University, Quebec, Canada. November 20-23, 2013.
- Comparison of Multilateration system (MLAT) with Secondary surveillance system (SSR) Case study: SDG, CQD and IIL airports, with M. Saffarzadeh and S. Bagheri. Presented at 17<sup>th</sup> International Air Transport Research Society Conference, Bergamo, Italy. June 26-30, 2013.
- Quality of Service Index Factors and Passenger Perspective, with I. Kovacic and R. Babic. Presented at 17<sup>th</sup> International Air Transport Research Society Conference, Bergamo, Italy. June 26-30, 2013.
- Value of Slots at London Heathrow Airport, Presented at 16<sup>th</sup> Air Transport Research Society Conference, Tainan, Taiwan. June 26-30, 2012.
- Assessing the Current State of Air Cargo, AFCA - Aircraft Finance & Commercial Aviation Conference, Barcelona, Spain. April 23-26, 2012.
- Financing the Future Transportation System, 53<sup>RD</sup> Annual Transportation Research Forum, Tampa, Florida. March 14-16, 2012.
- Government Failure, Market Failure and Public Interest: An Assessment of Airport Governance Policies with a Stakeholder Perspective. Presented at 15<sup>th</sup> Air Transport Research Society (ATRS) Conference, Sydney, Australia. June 29- July 1, 2011.
- The Economic Impact of Privative Institutions, presented at International Conference on Operation Research and Statistics, Penang, Malaysia, April 5-7, 2011.
- Privatization and Regulation; A Review of Airport Industry, 14<sup>th</sup> Global Business Development International Conference, Las Vegas, Nevada, March 20-23, 2011.
- Methods and Strategies in Commercial Aircraft Valuation. The 14<sup>th</sup> Air Transport Research Society World Conference. Porto, Portugal, July 6-9, 2010.
- Dynamic Changes of the Air Transport Industry. Aviation Information Technology in Engineering and Management (AITEM), New Orleans, Louisiana. March 22-24, 2010.
- Public Ownership and Private Operation: A Case of Commercial Airports. The International



Conference on Economics and Administration (ICEA-FAA). University of Bucharest, Romania. November 14-15, 2009.

- Determination of Statewide Economic Benefits of Civil and Commercial Airports in Arizona, Thirteenth Air Transport Research Society World Conference, Abu Dhabi, United Arab Emirates, June 27-30, 2009.
- Air Transport Liberalization: Challenges and Opportunities, International Business Economic Research Conference, Las Vegas, Nevada. September 29-October 2, 2008.
- "Statistical Analysis of Aging Aircraft, Region of the World and Airline Accidents" Presented at 12<sup>th</sup> Air Transport Research Society (ATRS) Conference, Athens, Greece. July 6-10, 2008.
- "The Maquiladora Industry: Recent Downturn and Future Prospects" International Applied Business Research Conference, San Juan, Puerto Rico. March 17-20, 2008.
- "An Empirical Investigation of the Relationship Between Market Conditions and Value of Commercial Aircraft," Presented at 11<sup>th</sup> Air Transport Research Society (ATRS) Conference, University of California, Berkeley. June 21-23, 2007.
- "Statistical Methodology to Assess Correlation Between Aircraft Safety, Age and International Regulation," Presented at the 10<sup>th</sup> Joint DoD/NASA/FAA Conference on Aging Aircraft Conference, Palm Springs, California. April 16-19, 2007.
- "The Methodology of Bank Valuation." Co-authored with R. Hamzaee, Presented at the 63rd International Atlantic Economic Conference, Madrid, Spain. March 14-18 2007.
- "Asset Valuation in Dynamic Markets." A Discounted Cash Flow Approach, third Annual Meeting of Applied Business and Entrepreneurship Association International, Waikoloa Beach Resort, Kona Island, Hawaii. November 16-20, 2006.
- "Statistical Analysis of Airline Safety." 69th Annual Meeting of the Institute of Mathematical Statistics, and the 5th International Symposium on Probability and its Applications, Rio de Janeiro. Brazil July 30–August 2, 2006.
- "Corporate Responsibility, Finance and Aviation Safety: Empirical Evidence." Presented at 10<sup>th</sup> Air Transport Research Society (ATRS) Conference, Nagoya, Japan. May 26-28, 2006.
- "An Application of Total Factor Productivity (TFP) to Measure the Efficiency of Commercial Airports" International Applied Business Research Conference, Cancun, Mexico. March 20-24, 2006.
- "Economic Impact of Institutions of Higher Education on Local Economy." Presented at 45<sup>th</sup>

Annual Meeting of Western Regional Science Association, Santa Fe, New Mexico. February 22-25, 2006.

- "A Collective Airport Airline Efficiency Strategic Model." With R. G. Hamzaee, presented at 9<sup>th</sup> Air Transport Research Society (ATRS) World Conference, Rio de Janeiro, Brazil. July 3-6, 2005.
- "Foreign Direct Investment and Economic Growth." With G. Rod Erfani, Presented at 14<sup>th</sup> Annual Congress of Global Awareness Society International, Rome, Italy. May 27-29, 2005.
- "A Productivity Analysis of U.S. Regional and Major Airlines." Presented at 44<sup>th</sup> Annual Meeting of Western Regional Science Association, San Diego, CA. February 23-26, 2005.
- "Globalization, Foreign Direct Investment and Privatization." With Mehdi Haririan, G. Rod Erfani, Presented at Second annual Conference of Association for Global Business and Social Sciences, Cancun, Mexico. November 18-21, 2004.
- "Airport Privatization: Issues for the Western Europe," With G. Rod Erfani, presented at 3<sup>rd</sup> Annual Conference of European Economics and Finance Society, Gdansk, Poland. May 13 - 16, 2004.
- "*Economic Impact of the Small Aircraft Transportation System (SATS)*" presented at 57<sup>th</sup> Annual Conference of International Atlantic Economic Conference, Lisbon, Portugal. March 10-14, 2004.
- "*Efficiency, Productivity and Scope of Operation: A Case Study on US Commercial Airports.*" Presented at Aviation in the 21<sup>st</sup> Century, Organized by National Aviation University, Kyiv, Ukraine. September 14-16, 2003.
- "An Evaluation of Commercial Airline Safety: *Assessment of Major, National and Regional Airlines Safety.*" With Rod Erfani, and F. Halldorsson, presented at the 7<sup>th</sup> Annual Conference of Air Transportation Research Society, Toulouse, France. July 10 - 12, 2003.
- "*Sensitivity of Student Enrollment with Respect to Tuition.*" With R. Hamzaee, presented at 55<sup>th</sup> Annual Conference of International Atlantic Economic Conference, Vienna, Austria. March 12-16, 2003.
- "A DEA Approach to Study the Size and Efficiency of U.S. Commercial Airports." With Massoud Bazargan presented at the 6<sup>th</sup> Annual Conference of Air Transportation Research Seattle. Washington, July 12-18, 2002.
- "An Analytical Approach to Aviation Safety." With R. ERFANI, and M. Haririan, presented at 53<sup>rd</sup> Annual Conference of International Atlantic Economic Conference, Paris, France. March

12, 17, 2002.

- “Testing Sensitivity of Student Enrollment with Respect to Tuition at Institution of Higher Education.” Presented at the 40<sup>th</sup> Conference of Western Regional Science Association Conference, Monterey, CA. February 17-20, 2002.
- “An Empirical Analysis of Financial and operational efficiency of Privatized Airports.” With Mehdi Haririan, presented at the 5<sup>th</sup> Annual Conference of Air Transportation Research Group, Jeju Island, Korea. July 19-22, 2001.
- “Effects of Marketization and Privatization on Investment and Saving,” With M. Haririan, Rod Erfani, presented at 51<sup>st</sup> Annual Conference of International Atlantic Economic Conference, Athens, Greece. March 13-20, 2001.
- “Financial and Operational Performances of the U.S. Major Hub Airports,” With R. Hamzaee, the 40<sup>th</sup> Conference of Western Regional Science Association Conference, Palm Springs, California. February 25 - 28, 2001.
- “Airport Efficiency: An Empirical Analysis of the US Commercial Airports,” Presented at the 4<sup>th</sup> Annual Conference of Air Transport Research Group, Amsterdam, the Netherlands. July 2nd-5th, 2000.
- A Comparative Analysis of Regional Airline Safety in the New Regulatory Environment Presented at the 49<sup>th</sup> Annual Conference of International Atlantic Economic Association, Munich, Germany. March 16-23, 2000.
- “A Revenue Cost Perspective to U.S. Airport Operations,” With R. Hamzaee, Presented at the 39<sup>th</sup> Annual Meeting of the Western Regional Science Association Conference, Kauai, Hawaii. February 26-28, 2000.
- “Financial Distress and Pricing Behavior in the Airline Industry,” Presented at the 47<sup>th</sup> Annual Conference of International Atlantic Economic Association, Vienna, Austria. March 16-23, 1999.
- “An Empirical Analysis of Airline Safety: The Case of Regional Airlines,” Presented at the 38<sup>th</sup> Annual Meeting of the Western Regional Science Association Conference, Ojai, CA. February 18-22, 1999.
- “The Economic Impact of Commercial Airports on the Local Economy,” Presented at the 45<sup>th</sup> North American Meetings Regional Science Association International, Santa Fe, New Mexico. November 11-14, 1998.
- “Airline Safety: Prospect and Retrospect,” With M. Haririan, Presented at the Forty-Fifth

Annual Conference of International Atlantic Economic Association, Rome, Italy. March 15-22, 1998.

- "The U.S. Airline Industry: How Are the Low Cost Air Carriers Doing?" With M. Haririan, Presented at the 37<sup>th</sup> Annual Meeting of the Western Regional Science Association Conference, Monterey, CA. February 18-22, 1998.
- "Non-Oil Export Promotion," With M. Haririan, Presented at the 67<sup>th</sup> Annual Meeting of the Southern Economic Association, Atlanta, Georgia. November 21-23, 1997.
- "The Impact of Airport Use Agreement on Airport Profitability and Efficiency," Bijan Vasigh, and M. Haririan, Presented at the 39<sup>th</sup> Annual Meeting of the Transportation Research Forum, Montreal, Canada. October 16-18, 1997.
- "Privatization and Public Choice in Education," Presented at the 22<sup>nd</sup> Annual Convention of Eastern Economic Association, Washington, D.C. April 3-6, 1997.
- "An Application of Probabilistic Inventory Analysis: A case of Airline Industry," Presented at the 36<sup>th</sup> Annual Meeting of the Western Regional Science Association Conference, Big Island, Hawaii, February 23-27, 1997.
- "Pattern of Transition," with M. Haririan, Presented at the 66<sup>th</sup> Annual Conference of Southern Economic Association, Washington, DC. November 23-25, 1996.
- "The Economic Impact of Privatization: The Case of Air Carrier Airports," Presented at the 35<sup>th</sup> Annual Meeting of Western Science Association Conference, Napa, California. February 25-29, 1996.
- "Impact of Airport User Charge Strategies on Airport Productivity," Presented at the 65<sup>th</sup> Annual Convention of Southern Economic Association, New Orleans, Louisiana. November 18-20, 1995.
- "Airline's Reservation Strategies." With R. Hamzaee, Presented at the 21<sup>st</sup> Annual Convention of Eastern Economic Association, New York City, New York. March 17-19, 1995.
- "Airport Privatization: A Simple Welfare Analysis." With M. Haririan, Presented at the Western Regional Science Association Conference, San Diego, California. February 22-25, 1995.
- "Airport Privatization and the Pricing of Airport Services." With Tom Tacker, and Ken Fleming, Presented at the 64<sup>th</sup> Annual Conference of Southern Economic Association, Lake Buene Vista, Florida, November 20-22, 1994.
- "Start-Up Airlines: A Counter-Cyclical Phenomenon." With A. Harraf, Presented at Thirty-Sixth Annual Transportation Research Forum Conference, Daytona Beach, Florida, November 3-5,

1994.

- "Interaction Between Traditional and Nontraditional Approach to Airport Financing." by Bijan Vasigh, M. Haririan, and A. Harraf, Presented at Thirty-Eight International Atlantic Economic Conference, Montreal, Canada. October 6-9, 1994.
- "Resurgence of New Airlines: Healthy Deregulation or Deja Vu All Over Again." With A. Harraf, the 20th Annual Convention of the Eastern Economic Association, Boston, Massachusetts. March 18-20, 1994.
- "Airline Seat Inventory Management." The 63<sup>rd</sup> Annual of the Southern Economic Association, New Orleans, Louisiana. November 21-23, 1993.
- "Airport Privatization: Procedures and Methods." With M. Haririan, the Sixty-Eight Annual Conference of Western Economic Association, Lake Tahoe, Nevada. June 20-24, 1993.
- "Aircraft Leasing Companies: What is the Future?" With H. Malden, the 35th Annual Conference of Western Social Science Association, Corpus Christie, Texas. April 21-24, 1993.
- "Privatization: The Challenge of the 1990's In Eastern Europe." With M. Haririan, the Sixty Second Annual Conference of the Southern Economic Association Conference, Washington, D.C. November 22-24, 1992.
- "The U.S. Airline Industry: An Empirical Analysis of the Decision to Buy or Lease Aircraft." by Bijan Vasigh, Hoyt Maulden, and Linda Block, the 34th Annual Conference of the Western Social Science Association, Denver, Colorado, April 22-25, 1992.
- "Issues and Problems in Airport Privatization." With M. Haririan, the Eighteenth Annual Conference of the Eastern Economic Association, New York, N.Y. March 27-29, 1992.
- "Estimating Lost Future Earnings Capacity: When the Individual Has no Earnings History." The Sixty First Annual Conference of Southern Economic Association, Nashville, Tennessee, November 24-26, 1991.
- "The Impact of the Energy Crisis on the Airline Industry." The Seventeenth Annual Conference of the Eastern Economic Association, Pittsburgh, Pennsylvania, March 15-17, 1991.
- "An Alternative Approach to Annuity Analysis: A Case of Stock Pricing Model." the Thirtieth International Atlantic Economic Conference, Williamsburg, Virginia, October 11-14, 1990.
- "The Total Offset Method in Present Value Calculation: A Review, a Criticism, and Recommendation." Conference of the Southern Economic Association, Orlando, Florida, November 1989.

- "An International Comparison of Wages and Prices." the conference of Western Economic Association, Lake Tahoe, June 1989.
- "The World Oil Market and western Dependence on OPEC." the Conference of the Eastern Economic Association. Baltimore, Maryland. March 1989.
- "Gasoline Price and the Demand for Automobile." the Eastern Economic Association Conference, New York, NY. March 1984.

***INVITED GOVERNMENT/INDUSTRY/ACADEMIC PRESENTATIONS:***

- Federal Bureau of Investigation (FBI). 2019 Air Carrier Security Directors (ACSD) Forum. Orlando, Florida, August 6-7, 2019.
- China Air Transport Association (CATA). Air transport financial Management. Beijing, China. November 20-24, 2017.
- Federal Aviation Administration and Transportation Research Board. Future of Unmanned Aircraft Systems, National Academies of Sciences, Washington, D.C. October 25-26, 2016.
- The 3<sup>rd</sup> International Civil Aviation Organization (ICAO), Air Transport Symposium (IATS). Aviation specific safeguards for competition, Montreal, Canada, March 30-31, 2016.
- American International Group (AIG) Client Summit, Unmanned Aircraft Systems (UAS) – Ready for Take Off, JW Marriott Scottsdale Camelback Inn, Phoenix, Arizona. October 20, 2015.
- Association of South Pacific Airlines (ASPA), Dynamic Pricing and Airline Revenue Management, Nadi, Fiji, June 10-14, 2015.
- Vietnam Airlines, Airline Pricing Structure, Hanoi, Vietnam, June 6-10, 2015.
- Second International Civil Aviation Organization (ICAO) Air Transport Symposium, the Impact of Levies on Air Transport Sustainability. ICAO Headquarters, Montréal, Canada. May 7-8, 2014.
- IATS 2014 Benchmarking Made Easy, AAAE/Southeast Chapter, Airport Finance and Administration Conference, Orlando Florida, January 26-28, 2014.
- Asia Pacific market sees stronger growth in low-cost airlines, Kainan University, Taoyuan, Taiwan, December 10-12, 2013.
- The Future Prospects of the Air Transport Industry within the Context of the Turbulent Economic Times, *Small Hotels & Business Development Conference*, United States Virgin Island, St. Thomas.

November 12-17, 2013.

- Legacy Airlines: The Fight for Survival, Tainan University of Technology, Tainan, Taiwan, December 8, 2013.
- Future of Regional Aircraft "*Airline Engine and Maintenance Conference*," San Francisco, CA., October 30 to November 1, 2012.
- Strategies and Tools for Sustainable Air Transport, ICAO Air Transport Symposium, Montréal, April 18 – 20, 2012.
- Considering the impact that the introduction of new aircraft will have on the residual value of existing fleets, "*Airline Engine, Finance and Leasing Conference*," Las Vegas, Nevada, October 1, 2012.
- Raising yields with optimal revenue management and pricing strategies, "*Low Cost Airlines World Conference*." Miami, Florida, May 3-4, 2011.
- Airline Revenue management, "*Seminar on Aircraft Repossession Summit*," Wyndham Miami Airport, June 24, 2010.
- Dynamic Changes of the Air Transport Market and Airline Networks of ASEAN and India: Strategic Challenges for the Proposed "New Airport in Southeastern Korea". Seoul, Korea, December 8-10, 2009.
- Aviation Industry: Challenges and Opportunities. CENTRA, Arlington, VA, August 7, 2009.
- Airport privatization in Latin America, Conferência Internacional Sobre Capital Privado em Aeroportos, FIESP-CIESP, Sao Paulo, Brazil April 22-23, 2009.
- Airport Ownership and Performance at the *Airport Economics and Finance Symposium*, Department of Transport Studies, University of Westminster, March 30 – April 4, 2009.
- Future Prospects of Air Transport Industry. Transportation Research Forum, 50<sup>th</sup> Annual Conference, Portland, Oregon, March 15-18, 2009.
- Financial and Operational Efficiency of Private and Public Airports. CIBER Multidisciplinary Research Workshop. College of Business, University of Florida, Gainesville, Florida, February 13, 2009.
- Latin American Air Transport Industry: Challenges and Opportunities. 12<sup>th</sup> Annual Latin America and Caribbean Airline Engineering & maintenance, Miami, FL, November 11-12, 2008.
- Negotiating Strategies for Creating a Liberalized Air Transport Bloc in Northeast ASIA. The Korea Transport Institute and East West Center (KOTI-EWC) Conference, Honolulu, Hawaii,



August 15-16, 2008.

- The Airline Industry: Opportunities and Challenges, the International Aviation Credit Group, Ft Lauderdale, FL., March 14, 2008.
- Airport Privatization in Latin America, the Seventeenth Airport Council International (ACI), World Annual General Assembly, Buenos Aires, Argentina, November 4-7, 2007.
- The Aviation Industry Strategies in the First Decade of the Twenty-First Century, Taiwan Air Transportation Symposium, Taipei, Taiwan, June 2-3, 2006.
- An Economic Framework for Airport Productivity, Speaker and Panelist, the 12th Annual Global Airport Development Forum (AGD), Paris 15-18, 2005.
- Future of Start-up and Low-Cost Airlines, the Conference of Air Transport Industry in the next Millennium, *Tehran*, Iran August 29-30, 2005.
- "Analyzing the Advantages/Disadvantages of Different Debt Restructuring Options Applicable to the Airlines" A chairman, speaker and panelist, Aircraft Finance & Commercial Aviation 2004, Geneva, *Switzerland* 24-27 Feb 2004.
- "Cost Benefit of Air Safety," speaker and panelist, The Eight Annual MRO Regulations, Quality & Safety Conference, London, *England*. 17 October 2001.
- "Aircraft Quality and safety," speaker and panelist, Seventh Annual Aircraft Quality and Safety Conformance, Brussels, *Belgium*. September 12-15, 2000.
- "Privatization of Airports and Airport Functions," speaker and panelist, the Thirty-Fourth Annual Airport Management Short Course Seminar, Sponsored by Arizona State University and Southwest Chapter American Association of Airport Executives (AAAE), Monterey, California, January 5-7, 1994.

#### **GRANTS:**

- Evaluating the Traveler's Perspective to Improve the Airport Customer Experience. Airport Cooperative Research Program (ACRP 01-40), \$500,000, 2019.
- QB Technologies Competitor Analysis, QB Technology Partners, LLC. \$25,000, 2018.
- Evaluation of the New Security Rules for Cargo on Inbound Flights. Faculty Development Funds, ERAU, 2010.
- Determination of Statewide Economic Benefits of Civil Aviation in Arizona. Faculty Development Funds, ERAU, 2010.

- Government of Korea, Dynamic Changes of the Air Transport Market and Airline Networks of ASEAN and India: Strategic Challenges for the Proposed “New Airport in Southeastern Korea”. 2009 KFP International Conference on Korea’s New Engines of Growth: Airlines and Maritime Logistics Services, Seoul, Korea, December 8-10, 2009.
- The Center for International Business Education and Research (Vietnam FDIB 2009), the Global Research/Curriculum Development Program, Ho Chi Minh City, January 04-09 and Hanoi, January 9-14, 2009.
- Co-Principal Investigator, Aircraft Valuation in Dynamic Air Transport Industry, Office of Vice President for Research and Federal Programs, ERAU, \$5,714, 2008.
- Co- Principal Investigator. Technical Assistance for Airport Improvements and Airspace Optimization in the Central Zone of Chile (2006-2007). A United States Trade and Development (USTDA) grant that was awarded to Embry Riddle University. The project involved a detailed econometric analysis of the demand for air travel in Chile and the requirements for air space and airport updates to accommodate any increase in demand, \$375,000.
- “Florida Department of Transportation (FDOT), Small Aircraft Transportation System (SATS): Economic Impacts Analysis, \$25,000, 2005-2006.
- “Strategic- Economic Framework of Airline Qualification Training Program.” Sponsored by ERAU, the office of Aviation and Space Technology Academy (ASTA), January-April 2002, \$15,000.
- Embry-Riddle Aeronautical University, The Office of Institutional Research, July-August 2001,  
“Testing Sensitivity of Student Enrollment with Respect to Tuition Increase.”
- Associate Provost for Graduate Programs and Research, March 2000: “Airport Operating Performance: Importance of Measuring Airport Efficiency.” \$5000.
- Dean of Graduate Programs and Research, summer of 1999, “A Statistical Model of Airline Safety,” \$2,000.
- Vice President’s Funds for Professional Development, spring, 1999, “Financial Distress and Pricing Behavior in U.S. Airline Industry,” \$2500.
- Vice President’s Funds for Professional Development, Spring of 1997, \$2190.

**EDITORIAL WORK ON BOOKS:**

- *Managerial Economics: Foundations of Business Analysis and Strategy*, 11<sup>th</sup> edition, by Christopher R. Thomas and S. Charles Maurice, McGraw-Hill/Irwin, 2012.
- *Managerial Economics: Foundations of Business Analysis and Strategy*, 10<sup>th</sup> edition, by Christopher R. Thomas and S. Charles Maurice, McGraw-Hill/Irwin, 2010.
- *Airline Finance*, P. Morrell, Ashgate Publishing Limited, 3<sup>rd</sup> Edition. *Transportation Journal*, Volume 47 (2), Spring 2008.
- *Managerial Economics*, W. Boyes, Houghton Mifflin Company, Second Edition, 2008.
- *Managerial Economics*, Applications, Strategy, and Tactics, J. McGuigan, C. Moyer, and F. Harris, South-Western, 11<sup>th</sup> Edition 2006.
- *Macroeconomics*, R. Barro, Thomson/South-Western College Publishing, Sixth Edition 2005.
- *Introduction to Management Science*, Bernard W. Taylor Prentice Hall, 7<sup>th</sup> Edition, 2004.
- *Managerial Economics*, 8<sup>th</sup> Edition, Truett and Truett, John Wiley & Sons, Inc, 2003.
- *Introduction to Management Science*, 6<sup>th</sup> edition, Taylor, Prentice Hall Publishing Company, 2000.
- *Operations Management for the Twenty-First Century*, Michael Showalter, M. Brusco, and D. Cradit, Addison Wesley Longman Publishing Company, 1998.
- *Economics*, Byrns and Stone, Addison Wesley Longman Publishing company, 1997.
- *Managerial Economics*, McCormick, Prentice Hall Publishing Company, 1993.

**TECHNICAL REPORTS:**

- Airport Benchmarking Report: Global Standards for Airport Excellence, 2008. Volumes 1, 2 and 3, Air Transport Research Society Benchmarking Team.
- Airport Benchmarking Report: Global Standards for Airport Excellence, 2007. Volumes 1, 2 and 3, the report produced by Air Transport Research Society Benchmarking Team.

***ACADEMIC AFFILIATION AND SERVICES:***

- Senate member of Executive Committee, Embry Riddle Senator, 2023
- Embry Riddle Senator, 2021-2022
- University Grievance Committee.
- Dean of Graduate Program Research Fund Awards: A member of proposal Evaluation Committee.
- Dean of Graduate Program Research Fund Awards: A member of proposal evaluation committee.
- Dean of Graduate Program Search Committee.
- University Promotion and Evaluation Committee.
- University Research Committee.
- Faculty Search Committee
- Chair, Thesis and Research Committee.
- Undergraduate Curriculum Committee.
- Graduate Committee.
- University Library Committee, Chairman, Webber College, Expanded Library collection during chairmanship, developed computer-based retrieval system.

***UNIVERSITY SERVICES:***

- Coordinator of MBAA Colloquium, invite nationally and internationally recognized speakers to attend and deliver speeches at the College of Business Administration Colloquiums. The colloquium provides our students with opportunities to interact with the leaders of the aviation industry, 1992-2008.

***PROFESSIONAL AFFILIATION:***

- Honorary member of "The Brazilian Institute of Strategic Studies and Public Policies in Air Transport."
- Air Transport Research Society (ATRS):
- Board of Advisors, Applied Business and Entrepreneurship Association International (ABEAI).
- Western Regional Science Association (WRSA).
- The Airline Group of the International Federation of Operational Research Societies,

AGIFORS (1999-2003).

- American Association of Airport Executives, Academic Member (1999-2002).
- Eastern Economic Association, Area Representative (1989-1997).

***COURSES TAUGHT:***

- Advanced Aviation Economics
- Corporate Finance
- Engineering Economics
- International Finance
- Operations Research
- Operations Management
- Managerial Economics
- Managerial Accounting

**Bill Kirkman**

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**From:** bijan vasigh <bijan.vasigh@gmail.com>  
**Sent:** Wednesday, February 21, 2024 9:28 AM  
**To:** Bill Kirkman  
**Subject:** Follow-up: February 21, 2024

Dear Mr. Kirkman:

I wanted to inform you that I have received the following five files related to the case.

1. Master File No. 96-74711
2. Master File no. 1:90-cv-2485
3. Case No. 96-74711
4. American Airlines v. Skiplagged
5. Appendix I. Federal Rules of Civil

Thank you for providing them promptly.

To ensure I focus on the most pertinent aspects of the case, could you please specify if there are particular points or documents within the files that require immediate attention? Additionally, if there are any specific instructions or priorities you'd like me to consider while reviewing the materials, please let me know.

I'll begin reviewing the files promptly and await your guidance on how to proceed.

Thank you for the opportunity to assist with your case.

Best regards,

Bijan

# **EXHIBIT B**



**Materials Presented to and Reviewed by Dr. Bijan Vasigh, Professor**

1. *Declarations of Aktarar Zamen*, dated October 22, 2023 and December 15, 2023
2. *First Amended Complaint of American Airlines*, filed August 17, 2023
3. *Hidden City travel and its impact on airfare*, February 2022  
<https://www.sciencedirect.com/science/article/abs/pii/S0191261521002290>
4. *American Airlines Suing Skiplagged*, September 4, 2023 (Video)  
[https://www.2news.com/news/american-airlines-suing-skiplagged/video\\_22c7ac7b-f3a9-5cbf-9efb-b4f629005c2a.html](https://www.2news.com/news/american-airlines-suing-skiplagged/video_22c7ac7b-f3a9-5cbf-9efb-b4f629005c2a.html)
5. *American Airlines barred a 17-year-old from flying with the airline for 3 years because he tried to use a 'skiplagging' ticket, the teen's father says*, July 17, 2023  
<https://www.insider.com/skiplagging-american-airlines-banned-teenager-hidden-city-ticket-canceled-2023-7>
6. *Judge throws out United Airlines lawsuit against 22-year-old*, May 1, 2015  
<https://money.cnn.com/2015/05/01/investing/united-airlines-lawsuit-skiplagged/index.html>
7. *What is skiplagging? Everything about the controversial air travel hack airlines hate*, July 23, 2023  
<https://www.usatoday.com/story/travel/airline-news/2023/07/23/what-is-skiplagging-hidden-city-ticketing/70438246007/>
8. *What is 'skiplagging' and why do the airlines hate when you do it?* August 23, 2023  
<https://www.npr.org/2023/08/23/1194998452/skiplagging-airfare-flying-skiplagged-american-airlines>
9. *American Airlines sues a travel site to crack down on consumers who use this trick to save money*, August 18, 2023  
<https://apnews.com/article/american-airlines-lawsuit-skiplagging-tickets-905acda8ac5fe302238cefd63ac864e3>
10. *What is skiplagging? All about the travel hack airlines hate*. July 14, 2023

<https://www.washingtonpost.com/travel/tips/skiplagging-flights-airlines-policy/>

11. *American Airlines is suing Skiplagged, accusing the travel site of being a 'classic bait and switch', August 17, 2023*  
<https://www.businessinsider.com/american-airlines-sues-skiplagged-deception-fares-copyright-infringement-2023-8>
12. *Whether You Call It 'Skiplagging' or 'Hidden-City Travel,' It's Contentious, September 9, 2023*  
<https://www.nytimes.com/2023/08/08/travel/skiplagging-hidden-city-travel-layover.html>
13. *American Airlines sues travel website Skiplagged over ticket price 'loophole', August 19, 2023*  
<https://www.theguardian.com/business/2023/aug/19/american-airlines-sues-skiplagged-ticket-price-loophole>
14. *Skiplagging Isn't Likely to Stop Anytime Soon, Even if Airlines Fight It, September 5, 2023*  
<https://www.phocuswire.com/american-airlines-skiplagging-airfares-united-airlines>
15. *American Airlines Sues Skiplagged, August 30, 2023*  
<https://www.nerdwallet.com/article/travel/american-airlines-sues-skiplagged>
16. *Why American Airlines Is Suing A Popular Website That Finds Cheap Airfares, August 22, 2023*  
<https://www.forbes.com/sites/suzannerowankelleher/2023/08/22/american-airlines-lawsuit-skiplagged/?sh=1dbde3f93a5e>
17. *American Airlines Sues Airfare Site Skiplagged, August 20, 2023*  
<https://onemileatatime.com/news/american-airlines-sues-skiplagged/>
18. *American Airlines files lawsuit against Skiplagged, August 22, 2023*  
<https://www.goodmorningamerica.com/travel/story/american-airlines-files-lawsuit-skiplagged-102422969>

19. *American Airlines sues skiplagging site, claiming it tricks passengers*, August 21, 2023  
<https://www.washingtonpost.com/nation/2023/08/21/american-airlines-skiplagged-lawsuit/>
20. *What to know about skiplagging, the controversial tactic to save money on flights*, August 21, 2023  
<https://www.today.com/life/travel/skiplagging-explainer-rcna100923>
21. *American Airlines Sues Skiplagged, Alleging False Savings Promises and Deceptive Practices*, August 24, 2023  
<https://skift.com/2023/08/24/american-airlines-sues-skiplagged-alleging-false-savings-promises-and-deceptive-practices/>
22. *American Airlines Becomes Latest Airline To Sue Skiplagged*, August 19, 2024  
<https://simpleflying.com/american-airlines-skiplagged-lawsuit/>
23. *American Airlines Becomes Latest Airline To Sue Skiplagged*, January 11, 2024  
<https://www.nerdwallet.com/article/travel/skiplagged-flights-guide>
24. *5<sup>th</sup> Circuit Calls Out Judge's Sanction as Abuse of Discretion, Again*, November 7, 2023  
<https://www.law.com/nationallawjournal/2023/11/07/5th-circuit-calls-out-judges-sanction-against-lawyer-as-abuse-of-discretion-again/?slreturn=20240322155412>
25. *Skiplagging: Why some flyers love it and why airlines hate it*, November 24, 2023  
<https://www.cnn.com/travel/skiplagging-hidden-city-explainer/index.html>
26. *Don't persecute skiplaggers*, November 22, 2023  
<https://www.dallasnews.com/opinion/editorials/2023/11/22/airlines-stop-persecuting-skiplaggers/>

# EXHIBIT C

From	To	Date	departure time
New Orleans	Dallas	7-Mar	7.00am
Tuscon	Dallas	7-Mar	6.15am
Denver	Dallas	7-Mar	7.17am
Nashville	Dallas	7-Mar	8.00am
Las Vegas	Dallas	7-Mar	6.45am
Austin	Dallas	7-Mar	8.15am
san francisco	Dallas	7-Mar	7.53am

From	Through	To	Date
New Orleans	DFW	Tuscon	7-Mar
New Orleans	DFW	Denver	7-Mar
New Orleans	DFW	Nashville	7-Mar
New Orleans	DFW	Las vegas	7-Mar
New Orleans	DFW	Austin	7-Mar
New Orleans	DFW	San francisco	7-Mar

From	Through	To	Date
Tuscon	DFW	New Orleans	7-Mar
Tuscon	DFW	Denver	7-Mar
Tuscon	DFW	Nashville	7-Mar
Tuscon	DFW	Las vegas	7-Mar
Tuscon	DFW	Austin	7-Mar
Tuscon	DFW	San francisco	7-Mar

From	Through	To	Date
Denver	DFW	New Orleans	7-Mar
Denver	DFW	Tuscon	7-Mar
Denver	DFW	Nashville	7-Mar
Denver	DFW	Las vegas	7-Mar
Denver	DFW	Austin	7-Mar
Denver	DFW	San francisco	7-Mar

From	Through	To	Date
Nashville	DFW	New Orleans	7-Mar
Nashville	DFW	Tuscon	7-Mar
Nashville	DFW	Denver	7-Mar
Nashville	DFW	Las vegas	7-Mar
Nashville	DFW	Austin	7-Mar
Nashville	DFW	San francisco	7-Mar

From	Through	To	Date
Las Vegas	DFW	New Orleans	7-Mar
Las Vegas	DFW	Tuscon	7-Mar
Las Vegas	DFW	Denver	7-Mar

Las Vegas	DFW	Nashvile	7-Mar
Las Vegas	DFW	Austin	7-Mar
Las Vegas	DFW	San francisco	7-Mar

From	Through	To	Date
Austin	DFW	New Orleans	7-Mar
Austin	DFW	Tuscon	7-Mar
Austin	DFW	Denver	7-Mar
Austin	DFW	Nashvile	7-Mar
Austin	DFW	Las Vegas	7-Mar
Austin	DFW	San francisco	7-Mar

From	Through	To	Date
San francisco	DFW	New Orleans	7-Mar
San francisco	DFW	Tuscon	7-Mar
San francisco	DFW	Denver	7-Mar
San francisco	DFW	Nashvile	7-Mar
San francisco	DFW	Las Vegas	7-Mar
San francisco	DFW	Austin	7-Mar



<b>Ticket price</b>
\$162
\$316
\$155
\$194
\$199
\$758
\$221

<b>departure time</b>	<b>Ticket price</b>	<b>hub price</b>	<b>price difference</b>	<b>hub premium</b>
7.00am	\$263	\$162	\$101	no
7.00am	\$241	\$162	\$79	no
7.00am	\$189	\$162	\$27	no
7.00am	\$269	\$162	\$107	no
7.00am	\$149	\$162	-\$13	yes
7.00am	\$159	\$162	-\$3	no

<b>departure time</b>	<b>Ticket price</b>	<b>hub price</b>	<b>price difference</b>	<b>hub premium</b>
6.15am	\$263	\$316	-53	yes
6.15am	\$504	\$316	188	no
6.15am	\$284	\$316	-32	yes
6.15am	x	\$316	x	x
6.15am	\$226	\$316	-90	yes
6.15am	x	316	x	x

<b>departure time</b>	<b>Ticket price</b>	<b>hub price</b>	<b>price difference</b>	<b>hub premium</b>
7.17am	\$241	\$155	\$86	no
7.17am	\$504	\$155	\$349	no
7.17am	\$241	\$155	\$86	no
7.17am	\$475	\$155	\$320	no
7.17am	\$203	\$155	\$48	no
7.17am	\$375	\$155	\$220	no

<b>departure time</b>	<b>Ticket price</b>	<b>hub price</b>	<b>price difference</b>	<b>hub premium</b>
8.00am	\$189	\$194	-\$5	yes
8.00am	\$284	\$194	\$90	no
8.00am	\$241	\$194	\$47	no
8.00am	\$238	\$194	\$44	no
8.00am	\$164	\$194	-\$30	yes
8.00am	\$168	\$194	-\$26	yes

<b>departure time</b>	<b>Ticket price</b>	<b>hub price</b>	<b>price difference</b>	<b>hub premium</b>
6.45am	\$269	\$199	\$70	no
6.45am	x	\$199	x	x
6.45am	\$386	\$199	\$187	no



6.45am	\$238	\$199	\$39	no
6.45am	\$199	\$199	\$0	same
6.45am	x	\$199	x	x

departure time	Ticket price	hub price	price difference	hub premium
8.15am	\$592	\$758	-\$166	yes
8.15am	\$549	\$758	-\$209	yes
8.15am	\$479	\$758	-\$279	yes
8.15am	\$458	\$758	-\$300	yes
8.15am	x	758	x	x
8.15am	x	758	x	x

departure time	Ticket price	hub price	price difference	hub premium
7.53am	\$159	\$221	-\$62	yes
7.53am	\$555	\$221	\$334	no
7.53am	\$375	\$221	\$154	no
7.53am	\$168	\$221	-\$53	yes
7.53am	x	\$221	x	x
7.53am	\$252	\$221	\$31	no

data from 2/22

data from 2/22

From	To	Date	departure time	Ticket price
New Orleans	Dallas	7-Mar	7:00am	\$162
Tucson	Dallas	7-Mar	6:15am	\$316
Denver	Dallas	7-Mar	7:17am	\$155
Nashville	Dallas	7-Mar	8:00am	\$194
Las Vegas	Dallas	7-Mar	6:45am	\$199
Austin	Dallas	7-Mar	8:15am	\$758
San Francisco	Dallas	7-Mar	7:53am	\$221

From	Through	To	Date	departure time	Ticket price	hub price	price difference	hub premium
New Orleans	DFW	Tucson	7-Mar	7:00am	\$263	\$162	\$101	no
New Orleans	DFW	Denver	7-Mar	7:00am	\$241	\$162	\$79	no
New Orleans	DFW	Nashville	7-Mar	7:00am	\$189	\$162	\$27	no
New Orleans	DFW	Las Vegas	7-Mar	7:00am	\$269	\$162	\$107	no
New Orleans	DFW	Austin	7-Mar	7:00am	\$149	\$162	\$13	yes
New Orleans	DFW	San Francisco	7-Mar	7:00am	\$159	\$162	\$3	no

From	Through	To	Date	departure time	Ticket price	hub price	price difference	hub premium
Tucson	DFW	New Orleans	7-Mar	6:15am	\$263	\$316	\$53	yes
Tucson	DFW	Denver	7-Mar	6:15am	\$504	\$316	188	no
Tucson	DFW	Nashville	7-Mar	6:15am	\$284	\$316	\$32	yes
Tucson	DFW	Las Vegas	7-Mar	6:15am	x	\$316	x	x
Tucson	DFW	Austin	7-Mar	6:15am	\$276	\$316	\$40	yes
Tucson	DFW	San Francisco	7-Mar	6:15am	x	316	x	x

From	Through	To	Date	departure time	Ticket price	hub price	price difference	hub premium
Denver	DFW	New Orleans	7-Mar	7:17am	\$241	\$155	\$86	no
Denver	DFW	Tucson	7-Mar	7:17am	\$504	\$155	\$349	no
Denver	DFW	Nashville	7-Mar	7:17am	\$241	\$155	\$86	no
Denver	DFW	Las Vegas	7-Mar	7:17am	\$475	\$155	\$320	no
Denver	DFW	Austin	7-Mar	7:17am	\$203	\$155	\$48	no
Denver	DFW	San Francisco	7-Mar	7:17am	\$375	\$155	\$220	no

From	Through	To	Date	departure time	Ticket price	hub price	price difference	hub premium
Nashville	DFW	New Orleans	7-Mar	8:00am	\$189	\$194	-\$5	yes
Nashville	DFW	Tucson	7-Mar	8:00am	\$284	\$194	\$90	no
Nashville	DFW	Denver	7-Mar	8:00am	\$241	\$194	\$47	no
Nashville	DFW	Las Vegas	7-Mar	8:00am	\$238	\$194	\$44	no
Nashville	DFW	Austin	7-Mar	8:00am	\$164	\$194	\$30	yes
Nashville	DFW	San Francisco	7-Mar	8:00am	\$168	\$194	\$26	yes

From	Through	To	Date	departure time	Ticket price	hub price	price difference	hub premium
Las Vegas	DFW	New Orleans	7-Mar	6:45am	\$269	\$199	\$70	no
Las Vegas	DFW	Tucson	7-Mar	6:45am	x	\$199	x	x
Las Vegas	DFW	Denver	7-Mar	6:45am	\$386	\$199	\$187	no
Las Vegas	DFW	Nashville	7-Mar	6:45am	\$238	\$199	\$39	no
Las Vegas	DFW	Austin	7-Mar	6:45am	\$199	\$199	\$0	same
Las Vegas	DFW	San Francisco	7-Mar	6:45am	x	\$199	x	x

From	Through	To	Date	departure time	Ticket price	hub price	price difference	hub premium
Austin	DFW	New Orleans	7-Mar	8:15am	\$592	\$758	\$166	yes
Austin	DFW	Tucson	7-Mar	8:15am	\$549	\$758	\$209	yes
Austin	DFW	Denver	7-Mar	8:15am	\$479	\$758	\$279	yes
Austin	DFW	Nashville	7-Mar	8:15am	\$458	\$758	\$300	yes
Austin	DFW	Las Vegas	7-Mar	8:15am	x	758	x	x
Austin	DFW	San Francisco	7-Mar	8:15am	x	758	x	x

From	Through	To	Date	departure time	Ticket price	hub price	price difference	hub premium
San Francisco	DFW	New Orleans	7-Mar	7:53am	\$159	\$221	-\$62	yes
San Francisco	DFW	Tucson	7-Mar	7:53am	\$555	\$221	\$334	no
San Francisco	DFW	Denver	7-Mar	7:53am	\$375	\$221	\$154	no
San Francisco	DFW	Nashville	7-Mar	7:53am	\$168	\$221	-\$53	yes
San Francisco	DFW	Las Vegas	7-Mar	7:53am	x	\$221	x	x
San Francisco	DFW	Austin	7-Mar	7:53am	\$252	\$221	\$31	no

# EXHIBIT 3

**Expert Report of Zal Phiroz, PhD**  
**AMERICAN AIRLINES INC. v. SKIPLAGGED INC.**

**Introduction: Qualifications and Background**

Dr. Zal Phiroz is an established supply chain expert. His report applies his expertise to the issues as respects American Airlines' ("AA") suit against Skiplagged, Inc. ("Skiplagged") and AA's involvement in the supply chain relative to the airline industry and what has been referred to in the litigation and herein and in the industry, as hidden-city ticketing. In addition to having industry experience (Proctor & Gamble (NYSE:PG), and TELUS (NYSE:T), Dr. Phiroz has held a number of academic appointments (Harvard University, USC, MSU). Dr. Phiroz currently holds an appointment as A/Professor (Clinical) at University of California, San Diego.

As a practitioner, Dr. Phiroz has managed numerous international supply chain projects, involving billion-dollar P&G brands (Iams, Tide), as well as collaboration with major retailers (Wal-Mart, Target) analyzing consumer behavior. Various supply chain initiatives implemented by Dr. Phiroz within the area of consumer behavior, target market definition, demand simulation, shrink maintenance, and the application of retail disruptive innovation techniques, are still actively in place.

As a founding partner at Pier Consulting Group, Dr. Phiroz has consulted on projects involving simulated projection and forecasting, aggregate data analysis on competitive markets, regression techniques and clustering in determining the validity of demand projections and identification of key markets. To these ends, opportunity quantification, consumer behavior and demand analysis have been hallmarks of Dr. Phiroz's work.

In addition to holding a PhD in Supply Chain Management (Hierarchical decision making patterns for the placement of physical supply chain entities), Dr. Phiroz has earned an MBA, and is a double Computer Science graduate of the University of Windsor (BS[Hons], BCS). His C.V. is attached hereto as Appendix A. A list of cases in which he has been engaged to provide expert testimony is attached as Appendix B.

## **REPORT**

### **Role and Appointment**

I understand that my role in this case is to evaluate and opine on the impact of hidden-city fares on consumer behavior and demand using my qualifications, background, education, and experience. From a supply chain perspective, I am specifically offering an opinion on why hidden-city fares exist, how Skiplagged's business and operations model make use of such hidden-city ticketing in the airline travel market, and that the practice of hidden-city ticketing and the business model of Skiplagged which provides information and opportunities associated with hidden-city ticketing is justified in the marketplace and provides a substantial benefit to consumers of air travel.

In forming my opinion in this case, I have been presented and reviewed a number of articles and documents noted in Appendix C.

### **Observations and Opinions**

1. A supply chain is an umbrella term, which aims to explain a variety of functions and processes present in the sourcing, production, distribution, purchasing and consumption phases of a product. From a practical perspective, a supply chain describes the connectivity and collaboration between several entities (including service providers, and brokers). Supply chain design and functionality, is often driven by consumer behavior analysis. American Airlines is involved in a supply chain as it relates to consumer air travel.
2. Each supply chain has a unique design, with respect to product/service movement, responsibilities, roles etc. Often, a supply chain design includes multiple entities which fulfil the same role to a different consumer segment. An example of this might be multiple retailers (e.g. Walmart and Best Buy) selling the exact same product. While the product is the same, the targeted consumer market might differ (e.g. Walmart and Best Buy could attract different market segmentations), and as such the prices of particular products might also differ (e.g. Best Buy may sell the same product at a slightly higher price compared to Walmart).
3. Hidden-city ticketing is a term used to explain the practice of a traveler booking a flight which has one or more layovers, and simply ending their journey at a layover point instead of at their originally scheduled final destination. Often, hidden-city fares are more inexpensive than direct flights.

For example, a traveler might want to travel from New York to Chicago. A direct flight from New York to Chicago might cost \$500, however a flight from New York to Los Angeles with a layover in Chicago might cost \$300. If a traveler books the New York to

Los Angeles flight, and simply exits the airport in Chicago, they have used a hidden-fare strategy and would have arrived at their destination at a cost of \$300 (as opposed to \$500). Essentially, the traveler would not use the Chicago to Los Angeles portion of the plane ticket.

4. The concept of hidden-city ticketing is not new and existed long before Skiplagged existed. Since airlines generally do not use fixed pricing (i.e. pricing is often not based on each flight, but rather based on the point of departure and point of arrival), there are often economic advantages to passengers using hidden-fare tickets.
5. Skiplagged's business model is relatively straightforward. Skiplagged focuses on educating potential consumers on how they might be able to purchase plane tickets (and other travel-related services) through the carrier's website (or another travel sites) at a cheaper price and facilitates a consumer's purchase of a ticket.

Skiplagged does not purchase tickets from airline carriers, nor does it directly sell tickets to customers. It essentially points consumers to websites (e.g., AA.com or authorized intermediaries or travel sites). Consumers then purchase tickets from the actual seller (e.g., AA.com or various third-party websites).

6. Consumer behavior and purchasing habits are a core function of a supply chain and are driven by a number of factors which impact demand. One of the more influential drivers of demand is price. American Airlines (as well as most major airlines) use dynamic pricing strategies in the context of supply chain economics. Essentially, the same seat is available for sale at different prices depending on when the ticket is bought and where it is bought (e.g., kayak.com vs. priceline.com vs. aa.com directly).

American Airlines assumedly uses this strategy to extract an advantage by marketing the same product to multiple categories of consumers (multiple segments). As the demand for leisure travel is elastic (the quantity demanded of a product, changes greatly in response to changes in its price), this strategy is an example of how consumer behavior may be influenced.

7. From an operational perspective, Skiplagged is educating consumers of the disadvantages and shortcomings to them of American Airline's pricing strategy and providing them a reasonable opportunity to counter American Airlines' strategy for their benefit.

As American Airlines is aware of the fact that hidden-fare ticketing exists, there are a number of options American Airlines has to limit (or entirely eliminate) Skiplagged's



business advantage and hence eliminate the advantage such brings to consumers, for example:

- American Airlines could decide to overhaul its pricing strategy to use static pricing (as opposed to dynamic pricing). In doing so, there would not be an advantage for hidden-fare ticketing.
- American Airlines could publicize the fact that in its view, hidden fare ticketing is not allowed and threaten customers with fines for using hidden ticket fares. This would limit the advantage of Skiplagged's business model.
- Bring a suit such as this against Skiplagged to drive Skiplagged out of business.

8. American Airlines has been aware that the hidden-city ticket model exists for some time and assumedly chose not to intervene or act to eliminate Skiplagged's advantage until this suit was brought. This is likely due to the fact that eliminating hidden fare businesses, could potentially negatively impact American Airlines' overall business model (e.g., since price is a critical demand driver, it can be assumed that fewer customers would want to purchase flights at a fixed cost).

9. In the same way that customers might try to manipulate the system by finding the cheapest price, airlines also participate in manipulating the system by constantly - and without clear explanation - changing their prices and often charging different prices to passengers on the same flight.

This occurs both for passengers on the flight who have the same itinerary and for passengers on the flight who have different itineraries (e.g. those who are connecting to various destinations).

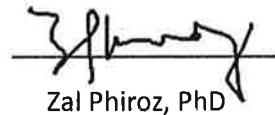
10. There is ample justification for the existence and use of hidden-city ticketing and fares in the marketplace and hence for the business of Skiplagged. The information provided on Skiplagged's website is free. Passengers can find the hidden-city ticket opportunities on Skiplagged and then book those same flights on AA.com, other airlines, Orbitz, or many other travel sites.

Skiplagged is providing a very valuable service to the consuming public by educating customers and displaying public information relevant to them, including the availability of hidden-city ticketing.

### **Basis for Opinion**

From an academic perspective, a supply chain is a network of businesses directly or indirectly involved in the development, distribution and sale of a product. While each supply chain will have a unique design and behave differently, consumer behavioral patterns are critical to the development of supply chain strategy and overall functionality. My industry experience, educational background, and academic involvement has led me to form the opinions shared within this report.

All opinions are given to a reasonable degree of professional certainty. I reserve the opportunity to supplement and/or amend these opinions if/when additional information becomes available. I also understand that I may be called to testify in rebuttal, or to respond to other opinions provided in this matter.



Zal Phiroz, PhD

# **APPENDIX A**

**INDUSTRY**

Founding Partner  
**Pier Consulting Group Inc.**

April 2010 - Present  
**Los Angeles, CA | Windsor, ON**

Collaboration with medium/large corporations on various areas of data analysis including sustainability, global logistics, supply chain management metrics, marketing segmentation and forecasted demand simulation.

- Direct marketing research and data analysis on competitive markets, cluster target demographics, growth opportunities and market niches.
- Predictive modeling and demand projection through various forms of regression analysis, meeting cross-functional cost optimization strategies.
- Collaboration with fortune 500 corporations including Procter & Gamble, DHL and Accenture.
- Consultation on quality control, manufacturing standards, and product liability (including topics related to consumer behavior, product differentiation and market trends).

Sr. Manager, Market Planning (North America)  
**Procter & Gamble Co.**

September 2007 - March 2010  
**Cincinnati, OH | Toronto, ON**

Managed national and international supply chain projects across the entire Procter & Gamble product portfolio. Responsible for market data analysis, demand forecasting and projection, national/international process customization, resource usage and high-level market analysis.

- Managed international supply chain processes and optimization initiatives across Procter & Gamble's \$2.9B pet care sector.
- Developed and managed forecasting initiatives leading to projected cost savings of \$14M.
- Led cross-functional US and Canadian analysis teams in the area of shrink. Recommended and successfully implemented strategies to reduce margin loss at partner retailers, warehouse and production plants, resulting in annual savings of \$23M across all banners.
- Initiated and managed national pilot programs for joint forecasting and supply chain customization with major partner retailers including Wal-Mart, Target and Shoppers Drug Mart.

Sr. Manager, Business Programs (Trade Marketing)  
**TELUS Communications Inc.**

October 2005 - May 2007  
**Toronto, ON**

Developed business programs within the TELUS data portfolio, interfacing with Product Development Direct Marketing, and Marketing Communications teams. Managed marketing objectives and developed specific sales programs using classification and projection regression simulation.

- Collaborated directly with sales channels (Independent Dealers, Enterprise, and Small/Medium Business) in establishing sales targets, distribution and promotional objectives.
- Managed entire data portfolio (\$1.8B) including Research in Motion, Palm and Motorola accounts.

## **Zal Phiroz MBA, PhD**

zphiroz@ucsd.edu | 647.393.1014 | San Diego California

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### **HIGHLIGHTS**

- Industry appointments at TELUS (NYSE: T), Procter & Gamble (NYSE: PG).
- Faculty appointments at UCSD, USC, Harvard. Inclusive Practice Fellowship at Harvard University.
- Qualifications: PhD, MBA, BS (CIS Hons.), BCS | CIPM, CISC, CPSCM, CISCMP

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### **ACADEMIA**

A/Professor and Lecturer, Innovation Technology and Operations  
**University of California, San Diego | Rady School of Management**

August 2019 - Present  
**San Diego, CA**

Instructed and developed senior level undergraduate, MSBA, MBA courses in Operations Management, Supply Chain Analytics and Business Analytics.

- Hosted C-suite speakers, and collaborated with industry partners (e.g. Flex, PetCo, Apple, Intel) ensuring course content alignment with market trends and industry recruitment standards.
- Developed course content integrating industry trends with analysis of various operations / supply chain areas (e.g. forecasting, demand projection and data mining).
- Alumni engagement sub-committee leader at the Institute for Supply Chain Excellence and Innovation (ISEI).
- Served as a faculty advisor in the Academic Internship Program (AIP).

A/Professor and Lecturer, Operations and Data Analytics  
**University of Southern California | Marshall School of Business**

October 2014 – August 2019  
**Los Angeles, CA**

Developed and instructed compulsory junior and senior level undergraduate, MS, MBA and OMBA courses in Operations Management, Management Consulting and Data Analytics for Decision Making.

- Developed data analysis modules on regression through JMP/R, focusing on clustering, classification, forecasting, queueing etc.
- Developed core Operations and Data Analysis courses for the undergraduate and initial Online MBA curriculum (ranked 5<sup>th</sup> in US News 2019 and 1<sup>st</sup> in Poets & Quants, 2018).

A/Professor and Lecturer, Supply Chain Management, Data Analysis (Term)  
**Harvard University | DCE - Graduate School of Arts & Sciences**

April 2013 – Present  
**Cambridge, MA**

Developed and instructed graduate courses within the area of Supply Chain Management and Operations. Implemented case analysis, and hosted several fortune 1000 C-suite guest speakers.

- Demonstrated case-work illustrating the practical value of decision tree modeling, logistic regression, linear programming and operations protocol.
- Initiated project collaboration through cases with Procter & Gamble, Unilever, Bombardier.

**EDUCATION AND PROFESSIONAL CREDENTIALS**

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PhD   Doctor of Philosophy (Dissertation: Hierarchical Decision Making Patterns for the Placement of Physical Supply Chain Entities) <b>University of Cape Town   Graduate School of Business</b>	July 2017 <b>Rondebosch, SA</b>
MBA   Master of Business Administration (International Marketing) <b>Wayne State University   Ilitch School of Business</b>	May 2005 <b>Detroit, MI</b>
BS (Hons)   Bachelor of Science (Honors, Computer Information Systems) <b>University of Windsor   School of Computer Science</b>	October 2003 <b>Windsor, ON</b>
BCS   Bachelor of Computer Science <b>University of Windsor   School of Computer Science</b>	June 2003 <b>Windsor, ON</b>
CIPM   Certified International Procurement Manager CISCM   Certified International Supply Chain Manager CISCPM   Certified International Supply Chain Planning Manager <b>International Purchasing and Supply Chain Management Institute</b>	June 2016 December 2015 March 2019 <b>Los Angeles, CA</b>

**SELECTED FELLOWSHIPS, HONORS AND AWARDS**

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Inclusive Practice Fellowship <b>Harvard University</b>	April 2023 <b>Cambridge, MA</b>
Directors Award for Excellence Global Fleet and Products <b>Amazon, Inc. (Global Logistics)</b>	August 2022 <b>Nashville, TN</b>
Deans Award for Community Development <b>University of Southern California</b>	June 2017 <b>Los Angeles, CA</b>
Annual Golden Apple Teaching Award for Faculty <b>University of Southern California</b>	August 2016 <b>Los Angeles, CA</b>

**SELECTED PRESENTATIONS AND PUBLICATIONS**

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Phiroz, Z. N. (2022). Supply Chain Influences, Impacts and Perspectives. [Presentation]. American Gear Manufacturers Association, Palm Beach.

Phiroz, Z. N. (2021). *Big Data: Application of Data in Defensive Merchandising and Shrink*. [Keynote Presentation]. Institute for Supply Management, Grand Rapids.

Phiroz, Z. N. (2020). *How COVID-19 May Rattle Companies' Supply Chains*. Legal News & Analysis on Litigation, Policy: Law360. <https://www.law360.com/articles/1283697>

Phiroz, Z. N. (2020). *Perspectives of Supply Chain Competitiveness— A Handbook*. Xanadu.





















Phiroz, Z. N. (2018). *Shrink Within the FMCG Space*. [Keynote Presentation]. Intermodal 2018, Sao Paulo.
















# **APPENDIX B**



**Prior Testimony and Deposition Experience**

**Dr. Zal Phiroz**

	Verbal Report	Written Report	Deposition
<u>Littlefield v. Nutribullet LLC et al.</u> 12/2017 – 9/2018			
<u>Skaggs v. Amazon.com Services Inc.</u> 5/2019 – 3/2022			
<u>Pacific Wine Distributors, Inc. &amp; Convoy Beverage Alliance v. J.F. Hillebrand USA, Inc., Sidekick Delivery, Inc. et al.</u> 3/2020 – 4/2021			
<u>Home Depot USA Inc. v. Columbia California Venture Industrial LLC et al.</u> 5/2021 – 7/2021			
<u>Butz v. Healthline Trading LLC</u> 8/2021 – 9/2021			
<u>I&amp;I Hair Corporation v. Beauty Plus Trading Co., Inc. et al.</u> 6/2021 – present (Case is ongoing)			
<u>Melendez v. 3M</u> 7/2021 – present (case is ongoing)			
<u>Tylt v. Wireless Advocates &amp; Costco Wholesale Corporation</u> 8/2021 – 8/2023			
<u>Zantac MDL- v. Pfizer, et al</u> 9/2021 – present (case is ongoing)			

	Verbal Report	Written Report	Deposition
<u>Kroger v. Waxman, et al</u> 2/2022 – 12/2022			
<u>Kearney v. Eckman et al.</u> 5/2022 - 4/2023			
<u>Martin v. Cintas et al.</u> 3/2022 - 9/2023			
<u>Lloyds Underwriters v. Rainbow Gold Inc. et al.</u> 6/2021 - 8/2023			
<u>McClellan v. Home Depot</u> 5/2023 - 7/2023			
<u>Lan Global v. Alchemy</u> 6/2023 - present (case is ongoing)			

# APPENDIX C

**Materials Presented to and Reviewed by Zal Phiroz, PhD**

1. *Declarations of Aktarar Zamen*, dated October 22, 2023 and December 15, 2023
2. *First Amended Complaint of American Airlines*, filed August 17, 2023
3. *Hidden City travel and its impact on airfare*, February 2022  
<https://www.sciencedirect.com/science/article/abs/pii/S0191261521002290>
4. *American Airlines Suing Skiplagged*, September 4, 2023 (Video)  
[https://www.2news.com/news/american-airlines-suing-skiplagged/video\\_22c7ac7b-f3a9-5cbf-9efb-b4f629005c2a.html](https://www.2news.com/news/american-airlines-suing-skiplagged/video_22c7ac7b-f3a9-5cbf-9efb-b4f629005c2a.html)
5. *American Airlines barred a 17-year-old from flying with the airline for 3 years because he tried to use a 'skiplagging' ticket, the teen's father says*, July 17, 2023  
<https://www.insider.com/skiplagging-american-airlines-banned-teenager-hidden-city-ticket-canceled-2023-7>
6. *Judge throws out United Airlines lawsuit against 22-year-old*, May 1, 2015  
<https://money.cnn.com/2015/05/01/investing/united-airlines-lawsuit-skiplagged/index.html>
7. *What is skiplagging? Everything about the controversial air travel hack airlines hate*, July 23, 2023  
<https://www.usatoday.com/story/travel/airline-news/2023/07/23/what-is-skiplagging-hidden-city-ticketing/70438246007/>
8. *What is 'skiplagging' and why do the airlines hate when you do it?* August 23, 2023  
<https://www.npr.org/2023/08/23/1194998452/skiplagging-airfare-flying-skiplagged-american-airlines>
9. *American Airlines sues a travel site to crack down on consumers who use this trick to save money*, August 18, 2023  
<https://apnews.com/article/american-airlines-lawsuit-skiplagging-tickets-905acda8ac5fe302238cefd63ac864e3>
10. *What is skiplagging? All about the travel hack airlines hate*. July 14, 2023

<https://www.washingtonpost.com/travel/tips/skiplagging-flights-airlines-policy/>

11. *American Airlines is suing Skiplagged, accusing the travel site of being a 'classic bait and switch', August 17, 2023*  
<https://www.businessinsider.com/american-airlines-sues-skiplagged-deception-fares-copyright-infringement-2023-8>
12. *Whether You Call It 'Skiplagging' or 'Hidden-City Travel,' It's Contentious, September 9, 2023*  
<https://www.nytimes.com/2023/08/08/travel/skiplagging-hidden-city-travel-layover.html>
13. *American Airlines sues travel website Skiplagged over ticket price 'loophole', August 19, 2023*  
<https://www.theguardian.com/business/2023/aug/19/american-airlines-sues-skiplagged-ticket-price-loophole>
14. *Skiplagging Isn't Likely to Stop Anytime Soon, Even if Airlines Fight It, September 5, 2023*  
<https://www.phocuswire.com/american-airlines-skiplagging-airfares-united-airlines>
15. *American Airlines Sues Skiplagged, August 30, 2023*  
<https://www.nerdwallet.com/article/travel/american-airlines-sues-skiplagged>
16. *Why American Airlines Is Suing A Popular Website That Finds Cheap Airfares, August 22, 2023*  
<https://www.forbes.com/sites/suzannerowankelleher/2023/08/22/american-airlines-lawsuit-skiplagged/?sh=1dbde3f93a5e>
17. *American Airlines Sues Airfare Site Skiplagged, August 20, 2023*  
<https://onemileatatime.com/news/american-airlines-sues-skiplagged/>
18. *American Airlines files lawsuit against Skiplagged, August 22, 2023*  
<https://www.goodmorningamerica.com/travel/story/american-airlines-files-lawsuit-skiplagged-102422969>

19. *American Airlines sues skiplagging site, claiming it tricks passengers*, August 21, 2023  
<https://www.washingtonpost.com/nation/2023/08/21/american-airlines-skiplagged-lawsuit/>
20. *What to know about skiplagging, the controversial tactic to save money on flights*, August 21, 2023  
<https://www.today.com/life/travel/skiplagging-explainer-rcna100923>
21. *American Airlines Sues Skiplagged, Alleging False Savings Promises and Deceptive Practices*, August 24, 2023  
<https://skift.com/2023/08/24/american-airlines-sues-skiplagged-alleging-false-savings-promises-and-deceptive-practices/>
22. *American Airlines Becomes Latest Airline To Sue Skiplagged*, August 19, 2024  
<https://simpleflying.com/american-airlines-skiplagged-lawsuit/>
23. *American Airlines Becomes Latest Airline To Sue Skiplagged*, January 11, 2024  
<https://www.nerdwallet.com/article/travel/skiplagged-flights-guide>
24. *5<sup>th</sup> Circuit Calls Out Judge's Sanction as Abuse of Discretion, Again*, November 7, 2023  
<https://www.law.com/nationallawjournal/2023/11/07/5th-circuit-calls-out-judges-sanction-against-lawyer-as-abuse-of-discretion-again/?slreturn=20240322155412>
25. *Skiplagging: Why some flyers love it and why airlines hate it*, November 24, 2023  
<https://www.cnn.com/travel/skiplagging-hidden-city-explainer/index.html>
26. *Don't persecute skiplaggers*, November 22, 2023  
<https://www.dallasnews.com/opinion/editorials/2023/11/22/airlines-stop-persecuting-skiplaggers/>